

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 December 2000 (21.12.2000)

PCT

(10) International Publication Number  
WO 00/76288 A2

(51) International Patent Classification: Not classified

(21) International Application Number: PCT/AU00/00654

(22) International Filing Date: 9 June 2000 (09.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
PQ 0904 10 June 1999 (10.06.1999) AU

(71) Applicant (for all designated States except US): SUN-  
SHINE HEART COMPANY PTY LTD [AU/AU]; 28D  
Montague Street, Balmain, NSW 2041 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PETERS, William,  
Suttle [NZ/NZ]; 93 Bassett Road, Remuera, Auckland  
1005 (NZ). MARSH, Peter, Crispin, Lawrence [AU/AU];  
82 Louisa Road, Birchgrove, NSW 2041 (AU). WHITE,  
Geoffrey, Hamilton [AU/AU]; 22 Nicholson Street, East  
Balmain, NSW 2041 (AU). MILSOM, Frederick, Pager  
[NZ/NZ]; 132 Long Drive, St Heliers, Auckland (NZ).  
HENRICHSEN, Hans, Hansforth [AU/AU]; 5 Smith  
Close, Shalvey, NSW 2770 (AU). UNGER, Rolf, Gunnar  
[AU/AU]; 58A Caroline Street, Kingsgrove, NSW 2208

(AU), SULLIVAN, Colin, Edward [AU/AU]; 27 Wharf  
Road, Birchgrove, NSW 2041 (AU).

(74) Agent: SPRUSON & FERGUSON; GPO Box 3898, Syd-  
ney, NSW 2001 (AU).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE,  
DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,  
ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,  
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO,  
NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,  
TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

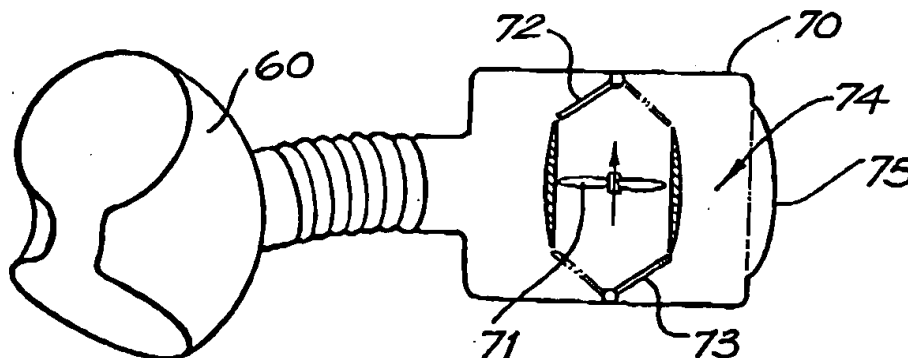
(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,  
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— Without international search report and to be republished  
upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: HEART ASSIST DEVICES, SYSTEMS AND METHODS



(57) Abstract: A heart assist device (10) adapted for implantation into a patient (99). The device (10) includes an aortic compression means (60) adapted, when actuated, to compress an aorta (15) of a patient (99), a fluid reservoir (74) and a pump means (71) adapted to pump a fluid from the fluid reservoir (74) to the aortic compression means (60) so as to actuate the aortic compression means (60) at least partly in counterpulsation with the patient's heart. The fluid reservoir (74) is adapted to be wholly positioned within the chest cavity of the patient (99).

WO 00/76288 A2